

Claims

1. A system for correcting a golf swing using the Internet, comprising:
 - photographing means for photographing a golf swing of a golfer and outputting corresponding data;
 - 5 image processing means for receiving data output from the photographing means, image-processing the data and outputting corresponding image data;
 - weight center detecting means for detecting movement of a center of weight during a golf swing and outputting a corresponding detection signal;
 - 10 club head detecting means for detecting an angle and a speed of a club head and outputting a corresponding detection signal;
 - signal processing means for receiving the detection signals output from the weight center detecting means and the club head detecting means, computing the movement of the center of weight and the angle and speed of the club head within an impact zone and outputting corresponding computation data;
 - 15 control means for receiving the image data and the computation data output from the image processing means and the signal processing means, respectively, synchronizing the image data and the computation data and outputting moving picture data;
 - 20 display means situated in front of a golf ball positioned in front of the golfer for displaying a currently performed golf swing, and receiving and displaying the moving picture data output from the control means;
 - practice center communication means for receiving and transmitting the moving picture data output from the control means, receiving and transmitting a request for provision of golf swing correcting data and a request for provision of moving pictures obtained during golf swing practice in response to a key manipulation of the golfer, and receiving and displaying golf swing correcting data and moving pictures obtained during golf swing practice;
 - 25 personal communication means for receiving and transmitting a request for

provision of golf swing correcting data and a request for provision of moving pictures obtained during golf swing practice in response to a key manipulation of the golfer, and receiving and displaying golf swing correcting data and moving pictures obtained during golf swing practice;

- 5 a Web server for receiving the request output from the practice center communication means or personal communication means, outputting a corresponding control signal, and outputting golf swing correcting data or moving picture data to the practice center communication means or personal communication means;
- 10 a three-dimensional data generating server for receiving the control signal output from the Web server, generating a wire frame, that is, three-dimensional posture data of the golfer, comparing this generated wire frame with a stored reference wire frame, and outputting golf swing correcting data;
- 15 a golf swing managing server for receiving the control signal output from the Web server, storing moving picture data of golf swing practice of the golfer, and outputting the stored moving picture data; and
- a mail server for receiving the control signal output from the Web server, and outputting various golf information to the practice center communication means or personal communication means via e-mail.

20 2. The system as set forth in claim 1, wherein the control means allows a golf swing correcting program to be installed so that the golfer can correct his golf swing using a wire frame at a golf practice center.

 3. A method of correcting a golf swing using the Internet, comprising the steps of:

25 a Web server determining whether a golfer has accessed a home page for correcting a golf swing through practice center communication means or personal communication means;

a process returning to a preceding step if the golfer has not accessed the home page, and, on the other hand, the Web server determining whether the golfer has accessed the home page through the practice center communication means if the golfer has accessed the home page;

5 the Web server determining whether a golf practice center and the golfer are members if the golfer has accessed the home page through the practice center communication center;

10 the Web server requesting member registration if the golf practice center and the golfer are not members at a preceding step, and, on the other hand, the Web server determining whether the golfer has requested provision of golf swing correcting data through the practice center communication means if the golf practice center and the golfer are members;

15 the Web server determining whether the golfer has corrected his golf swing using preset reference golf swing through the practice center communication means if the golfer has requested provision of golf swing correcting data through the practice center communication means at a preceding step;

20 the Web server receiving and transmitting moving pictures of golf swing practice through the practice center communication means and outputting a corresponding control signal if the golfer has corrected his golf swing using the preset reference golf swing at a preceding step; and

25 a three-dimensional posture data generating server receiving the control signal output from the Web server, generating a wire frame, that is, three-dimensional posture data, comparing the generated wire frame with a stored reference wire frame, and outputting golf swing correcting data to the practice center communication means.

4. The method as set forth in claim 3, further comprising the steps of:

the Web server determining whether the golfer has accessed the home page through the personal communication means if the golfer has not accessed the home

page through the practice center communication means;

the process returning to the step of a Web server determining whether a golfer has accessed a home page for correcting the golf swing through the practice center communication means or personal communication means if the golfer has

5 not accessed the home page through the personal communication means, and, on the other hand, the Web server determining whether the golfer is a member if the golfer has accessed the home page through the personal communication means;

the Web server requesting member registration if the golfer is not a member at a preceding step, and, on the other hand, the Web server determining whether

10 the golfer has requested provision of golf swing correcting data through the personal communication means if the golfer is a member at the preceding step;

the Web server outputting a corresponding control signal if the golfer has requested the provision of golf swing correcting data at a preceding step;

the golf swing managing server receiving the control signal output from the Web server, and transmitting stored moving picture data of golf swing practice of the golfer; and

the three-dimensional posture data generating server receiving the control signal output from the Web server, generating a wire frame, that is, three-dimensional posture data of the golfer, using the moving picture data transmitted

20 from the golf swing managing server, comparing the generated wire frame with a stored reference wire frame, and outputting golf swing correcting data to the personal communication means.

5. The method as set forth in claim 3, further comprising the steps of:

the Web server determining whether the golfer has requested provision of moving pictures of his golf swing practice if the golfer has not requested the provision of the golf swing correcting data at the step of the Web server determining whether the golfer has requested the provision of golf swing correcting data first;

the Web server providing general golf information via a mail server if the golfer has not requested the moving pictures of his golf swing practice at a preceding step, and, on the other hand, the Web server outputting a corresponding control signal if the golfer has requested the moving pictures of his golf swing practice at the preceding step; and

5 the golf swing managing server receiving the control signal output from the Web server, and outputting stored moving pictures of golf swing practice of the golfer to the practice center communication means.

6. The method as set forth in claim 3, further comprising the steps of:
- 10 the Web determining whether the golfer has set a reference posture to his golf swing posture through the practice center communication means if the golfer has not corrected his golf swing using a preset golf swing;
- 15 the process returning to the step of the Web server determining whether the golfer has requested the moving pictures of golf swing practice if the golfer has not set a reference posture to his golf swing posture through the practice center communication means, and, on the other hand, the Web server transmitting moving picture data input from the practice center communication means and outputting a corresponding control signal if the golfer has set a reference posture to his golf swing posture through the practice center communication means; and
- 20 the three-dimensional posture data generating server receiving the moving picture data and the control signal output from the Web server, generating a wire frame corresponding to golf swing posture of the golfer, and setting the reference golf swing posture to the generated wire frame.

7. The method as set forth in claim 4, further comprising the steps of:
- 25 the Web server determining whether the golfer has requested provision of stored golf swing correcting data if the golfer has not requested the provision of golf swing correcting data at the step of the Web server determining whether the

golfer has requested the provision of golf swing correcting data second;

the Web server outputting a corresponding control signal if the golfer has requested the stored golf swing correcting data; and

5 the three-dimensional posture generating server receiving the control signal output from the Web server and outputting the stored golf swing correcting data to the personal communication means.

8. The method as set forth in claim 7, further comprising the steps of:

10 the Web server determining whether the golfer has requested provision of moving pictures of his golf swing practice through the personal communication means if the golfer has not requested the stored golf swing correcting data;

15 the Web server providing general golf information if the golfer has not requested provision of moving pictures of his golf swing practice through the personal communication means, and, on the other hand, the Web server outputting a corresponding control signal if the golfer has requested provision of moving pictures of his golf swing practice through the personal communication means; and

the golf swing managing server receiving the control signal output from the Web server and outputting stored moving pictures of golf swing practice to the personal communication means.

9. The method as set forth in claim 3 or 6, wherein the wire frame is generated by a method comprising the steps of:

20 a three-dimensional posture data generating server receiving moving picture data from practice center communication means through a Web server and converting each frame of the moving picture data into an image;

25 image-processing the converted images to images of a certain size;
setting joint points of a golfer using the processed images;
extracting parameters associated with movement of the golfer using the set joint points;

extracting angle data of each changed joint of the golfer using the parameters; and

generating the wire frame of the golfer using angle data corresponding to each image.